

## **Principle – Superblast**

The water and media are agitated in the sump of the machine forming a slurry. This is pumped through to the blast gun using a glandless polyurethane pump which is submerged in the machine sump. Compressed air is added at the blast nozzle to accelerate the slurry and provide the cleaning effect. After contact with the component the slurry then drains back into the sump creating a re-circulating system. Fine broken down media and other contaminants are fed via the overflow to a sedimentation filter located at the rear of the cabinet.



## **Cabinet Construction**

The cabinet is constructed in 100% stainless steel. The main outer shell is a fully welded construction using 2 and 3mm stainless steel sheet. Box section and flat section is used as reinforcement/bracing. The whole machine is fully electrostatically powder coated for a durability. The cabinet floor is manufactured using stainless steel (perforated) and is supported on a frame.

## **Right Hand Opening Door**

A reinforced steel fabricated door with full depth and height access is situated to the right hand side of the cabinet. Air cushioned seals are fitted and the door is secured by a quality chrome slam shut door handle.



## **Blast Chamber**

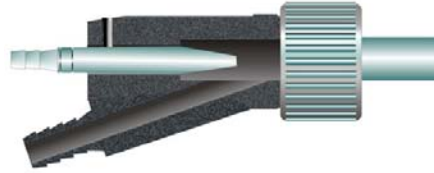
Full width side supports are fitted at the top of the sump over which a reinforced stainless steel floor is fitted. This floor is perforated (usually 8mm holes) to sieve the majority of large debris, preventing this quickly contaminating the solution. The standard load capacity of the floor is 250Kg for model 1215 and 1515 models and 80kg for the 915 model.

### **Rubber Lining**

The internal cabinet walls above the floor height are bonded in rubber for noise suppression and to avoid wear to the stainless steel. For very aggressive conditions replaceable para-rubber hanging curtains can be supplied at an additional cost.

### **Polyurethane Blast Gun and Foot Control**

The blast gun is a cast unit manufactured in polyurethane and is both lightweight and wear resistant. The blast gun is fitted as standard with a silicone carbide nozzle to suit individual air supplies. A boron carbide nozzle is also available for long life when using aluminium oxide abrasives. The gun is operated via a foot pedal control which when depressed pumps abrasive slurry to the blast gun at approximately 25psi. Compressed air is then added at the blast gun to propel the media slurry at high velocity onto the component surface to be cleaned.



### **Rinse Gun**

After blasting the components a rinse/wash gun is fitted inside the blast machine to enable the operator to rinse the components prior to them being removed from the cabinet. This water is normally supplied by mains water and residue overflows into the sedimentation box.

### **Dual Purpose Filter Unit**

A stainless steel dual purpose sedimentation box accepts water and fine particles which overflow from the blast cabinet. This liquid then enters the sedimentation box. A paper cartridge roll can be incorporated to assist removal of oil and grease and other contaminants. The solution entering the sedimentation box settles separating particles from the liquid. This liquid can either be disposed of or alternatively used for the water wash gun by fitting the optional air pump.

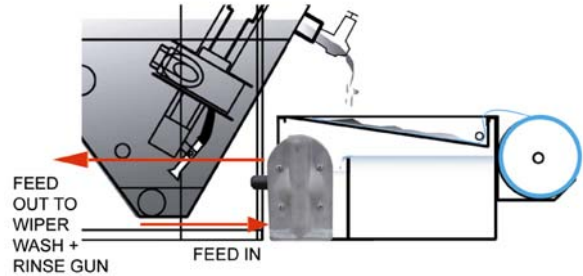


### **Additional closed loop rinse pump for filter unit – Optional Extra**

***Closed loop implies that the machine will not require a drain nearby and will not consume large amounts of water.***

The basis for a closed loop system is a large filter unit (similar to that shown above) which filters the liquid sufficiently so it may be used for the rinse gun and also the window wash. Obviously some top up or replacement of clean water will be required from time to time but the machine will not require a continual drain supply.

The window wash and rinse gun use recycled water which is pumped from the filter unit using a heavy duty air operated diaphragm pump.



### **Sump Overflow Pipe**

This is situated at the rear of the blast machine and simply connects to the dual purpose filter unit.

### **Submersible Polyurethane Pump**

The abrasive pump is a cast 2 piece polyurethane construction which is mounted and clamped into a stainless steel housing. Inside the housing is a pump impellor which rotates at 2800 rpm. This impellor throws the slurry via 4 curved impellor blades for maximum efficiency. The impellor is cast polyurethane which has a stainless steel liner and threaded boss.



### **Quick Release Pump & Motor Assembly**

The main benefits of a submersible pump are that it doesn't block with abrasive when the machine is stood, for example overnight. The unit can also be easily removed from the sump via the rear of the machine without any requirement to drain the machine.

All fixtures such as the filter and agitational nozzle are mounted to the housing which means the pump can be removed in only a few minutes for bench service. The electrical connections for the motor and the blast gun are both quick release.



### **Water Draw Off Valve**

This valve is situated in the machine hopper above the abrasive level. The purpose of this valve is to easily remove dirty, contaminated water from the blast machine. This operation can be carried out easily once the machine is switched off and the abrasive has settled to the bottom of the sump.

### **Immersion Heater**

When removing heavy oils and grease a warm/hot solution performs quicker than simply cold water and detergent. The Superblast is fitted with a 3kW heavy-duty heater which is fitted with an integral thermostat to maintain a constant temperature.



### **Armholes – Sealed Gauntlets**

Two armholes are fitted to the machine 915 and 1215 machines. Four off are fitted to the 1515 machine. These have a circular flange mounted to the outside of the machine. Replacement is simple as the clamps are mounted externally and therefore do not deteriorate and take only a few minutes to replace.

### **Lighting**

The lighting inside the cabinet is by way of two externally mounted 18 watt fluorescent tubes which are mounted on the roof of the cabinet, situated behind a laminated glass cover.



### **Window Wiper & Wash**

A 12 volt window wiper cleans the operator view window to maintain visibility. The wash facility is mains water and activates in conjunction with the wiper when the foot pedal is depressed and blasting commences.

### **Leg Mounted Regulator & Pressure Gauge**

Wet Blasting can offer a varied finish depending on the air pressure, in some cases the pump pressure alone can effectively polish some materials without air being required. Due to this the Aquablast has an easily accessed gauge and regulator for the operator to adjust.

